

I claim:

1        1.        In a parking lot, a self-guiding shopping cart collection, storage, and retrieval  
2        system, comprising:

3                at least one array of a plurality of demarcated parking spaces arranged as a  
4        row having a length, wherein each of said parking spaces has demarcation lines on  
5        either side defining a plurality of aisle ways between said plurality of parking spaces;

6                a collection channel adjacent and parallel to said row formed as an inset  
7        trough configured to allow rolling translation of a shopping cart along the length of  
8        the row to a collection end, said collection channel having a generally planar floor  
9        and at least one inclined side bank wherein said floor is downwardly linearly inclined  
10       toward said collection end; and

11               a plurality of lateral feed channels intersecting with said collection channel  
12       and aligned with said aisle ways, said plurality of lateral feed channels having said  
13       each having opposing side banks and configured to allow rolling translation of a  
14       shopping cart from the parking lot into said collection channel, said lateral feed  
15       channels having a linearly inclined floor with an upper end contiguous to said  
16       parking lot and a lower end contiguous to said floor of said central channel whereby  
17       shopping carts from the parking lot are introduced into said lateral feed channels and

18 guided therethrough by said opposing side banks into said collection channel.

19  
1 2. The system of claim 1, wherein said collection channel and said lateral feed  
2 channels are formed from a rigid material inset into a substrate.

3  
1 3. The system of claim 1, wherein said collection end of said collection channel  
2 includes an oppositely sloping ramp intersecting with said floor of said collection  
3 channel whereby shopping carts in the collection channel can be pushed up the ramp  
4 to the parking lot.

1 4. In a parking lot , a self-guiding shopping cart collection, storage, and retrieval  
2 system, comprising:

3 at least one array of a plurality of demarcated parking spaces arranged as a  
4 row having a length, wherein each of said parking spaces has demarcation lines on  
5 either side defining a plurality of aisle ways between said plurality of parking spaces;

6 a collection channel adjacent to said and parallel to said row formed as an  
7 inset trough configured to allow rolling translation of a shopping cart along the  
8 length of the row to a collection end, said collection channel having a generally

9 planar floor and at least one linearly inclined side bank having a lower edge  
10 contiguous to said floor of said collection channel and an upper edge contiguous to  
11 the parking lot wherein said floor is downwardly linearly inclined toward said  
12 collection end; and

13 a plurality of barrier units having a quadrilateral configuration flushly adjoined  
14 to at least one of said opposing side banks and aligned with each of said plurality of  
15 parking spaces, each of said barrier units including a front curb portion adjacent to  
16 said floor of said collection channel and opposing side curb portions aligned with  
17 said demarcation lines, whereby said barrier units define a plurality of lateral feed  
18 channels intersecting with said collection channel and aligned with said aisle ways  
19 whereby shopping carts from the parking lot are introduced into said lateral feed  
20 channels and guided therethrough by said opposing side banks into said collection  
21 channel.

1 5. The system of claim 4, wherein said collection channel is formed from a rigid  
2 material inset into a substrate.

1 6. The system of claim 4, wherein said barriers are formed from concrete.

1 7. The system of claim 4, wherein said barriers are formed from molded rubber.

- 1        8.     The system of claim 4, wherein said barriers are formed from molded plastic.
- 1        9.     The system of claim 4, wherein said barriers are formed from molded recycled  
2        materials.
- 1        10.    The system of claim 4, wherein said barriers are formed from wood.
- 1        11.    The system of claim 4, wherein said barriers are formed from metal.
- 1        12.    The system of claim 4, wherein said collection end of said collection channel  
2        includes an oppositely sloping ramp intersecting with said floor of said collection  
3        channel whereby shopping carts in the collection channel can be pushed up the ramp  
4        to the parking lot.
- 1        13.    A method for providing a self-guiding shopping cart collection, storage, and  
2        retrieval system in a parking lot, comprising:  
3                providing at least one array of a plurality of demarcated parking spaces  
4        arranged as a row having a length, wherein each of the parking spaces has

5 demarcation lines on either side defining a plurality of aisle ways between the  
6 plurality of parking spaces;

7 providing a collection channel adjacent to and parallel to the row formed as an  
8 inset trough of a rigid material set into a substrate; the collection channel being  
9 configured to allow rolling translation of a shopping cart along the length of the row  
10 to a collection end, wherein the collection channel has a generally planar floor and at  
11 least one linearly inclined side bank having a lower edge contiguous to the floor of  
12 the collection channel and an upper edge contiguous to the parking lot wherein the  
13 floor is downwardly linearly inclined toward the collection end;

14 attaching a plurality of barrier units having a quadrilateral configuration to at  
15 least one of the opposing side banks wherein the barrier units are aligned with each  
16 of the plurality of parking spaces, each of the barrier units including a front curb  
17 portion adjacent to the floor of the collection channel and opposing side curb portions  
18 aligned with the demarcation lines; and

19 providing an oppositely sloping ramp whereby shopping carts in the collection  
20 channel can be pushed up the ramp to the parking lot, whereby the barrier units  
21 define a plurality of lateral feed channels intersecting with the collection channel and  
22 aligned with the aisle ways whereby shopping carts from the parking lot are  
23 introduced into the lateral feed channels and guided therethrough by the opposing  
24 side banks into the collection channel.

- 1        14.    The system of claim 13, wherein said barriers are formed from concrete.
- 1        15.    The system of claim 13, wherein said barriers are formed from molded rubber.
- 1        16.    The system of claim 13, wherein said barriers are formed from molded plastic.
- 1        17.    The system of claim 13, wherein said barriers are formed from molded  
2        recycled materials.
- 1        18.    The system of claim 13, wherein said barriers are formed from wood.
- 1        19.    The system of claim 13, wherein said barriers are formed from metal.